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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,540	09/29/2003	Ari Juels	4414-37	1843
7590 11/09/2004			EXAMINER	
Ryan, Mason & Lewis, LLP			YANG, CLARA I	
90 Forest Avenue			ART UNIT	PAPER NUMBER
Locust Valley, NY 11560			2635	

DATE MAILED: 11/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,540

Applicant(s)

JUELS ET AL.

Examiner

Clara Yang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8, 9, 11, 12, 17, 25, 26 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 10, 13-16, 18-24 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/11/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

1. Claims 6, 7, 10, 13 - 16, 18 - 24, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
2. Claim 31 is allowed. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or suggest a radio frequency identification (RFID) system comprising a plurality of RFID tags, at least one interrogator or reader, and a jamming device that transmits information to the interrogator, wherein the jamming device's information specifies a particular range of tag IDs being blocked by the jamming device.

Claim Objections

3. Claim 28 is objected to because of the following informalities: "selectable responsive to a command" is not in proper idiomatic English. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 - 5 and 28 - 30 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application No. US 2004/0100359A1 (Reade et al.).

Referring to claim 1, Reade's method for jamming radio frequency identification (RFID) smart tag systems comprises the steps of: (a) jamming device 30 receiving in a communication directed from scanner 16 (i.e., the reader) to one or more RFID smart tags 14, each having an RFID chip 32/RFID device (see Sections [0008], [0023], and [0031]); and (b) jamming device 30 generating a plurality of pulse signals 20 (i.e., an output transmittable to the reader), pulse signals 20 simulating responses from a plurality of RFID smart tags 14 in a manner that prevents scanner 16 from determining at least a portion of the identifier of at least one of the RFID devices (see Sections [0027], [0030], and [0031]).

Regarding claim 2, Reade teaches that jamming device 30 comprises a large volume of RFID chips 32 (see Sections [0008], [0009], [0023], and [0030]).

Regarding claim 3, Reade's jamming device 30 detects scanner 16's RF signal and transmits a jamming signal, which is modulated with false information, at the detected frequency (see Section [0014]); thus jamming device 30 generates an output based at least in part on information in scanner 16's signal (i.e., the operating frequency).

Regarding claim 4, per Reade, jamming device 30 generates a jamming signal that simulates simultaneous responses from multiple RFID smart tags 14 (see Sections [0008], [0009], [0027], [0030], and [0031]).

Regarding claim 5, as shown in Fig. 1, Reade discloses that a consumer carrying jamming device 30 to inhibit scanner 16 from effectively detecting smart tags 14 in any products purchased or otherwise associated with the consumer (see Section [0028]). Here it is understood that any smart tag 14 near jamming device 30 is within a designated privacy zone;

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thus only responses from those smart tags 14 within the privacy zone are blocked from scanner 16.

Regarding claim 28, Reade teaches that in one embodiment, jamming device 30 can be activated or deactivated at the will of the user (see Section [0017]). In other words, jamming device 30's privacy policy of actuating its RFID chips 32 is selected by and responsive to enabling and disabling commands.

Referring to claims 29 and 30, Reade's RFID smart tag system, as shown in Fig. 1, comprises: (a) a plurality of smart tags 14, each having an RFID chip and an associated identifier as explained above (see Sections [0023] and [0028]); (b) scanner 16 that communicates with smart tags 14 (see Sections [0026] - [0028]); and (c) jamming device 30 that receives a communication directed from scanner 16 to smart tags 14 and generates and transmits an output to scanner 16, the output simulating a plurality of responses from RFID smart tags 14 in a manner that prevents scanner 16 from determining the identifier of at least one of the RFID smart tags 14 (see Sections [0008], [0009], [0027], [0030], and [0031]).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 8, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. US 2004/0100359A1 (Reade et al.) as applied to claim 1 above, and further in view of U.S. Patent No. 6,061,344 (Wood, Jr.).

Regarding claims 8, 9, and 12, Reade is silent on scanner 16 determining the identifiers of RFID smart tags 14 via a singulation algorithm (as required in claim 8), specifically a tree-walking algorithm (as called for in claim 9) or an ALOHA algorithm (as called for in claim 12).

In an analogous art, Wood teaches an RFID system, as shown in Fig. 1, comprising at least one interrogator 26 and a plurality of RFID tags 12 (see Col. 4, lines 26 - 35). In order for interrogator 26 to identify RFID tags 12, Wood teaches several arbitration schemes (i.e., singulation algorithms), such as a tree search or tree-walking (see Fig. 4; Col. 6, lines 4 - 67; Col. 8; and Col. 9, lines 1 - 49), the ALOHA method (see Col. 11, lines 5 - 8 and 40), and the slotted ALOHA method (see Col. 11, lines 8 - 21 and 41 - 59).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Reade's scanner 16 as taught by Wood because arbitration schemes, such as tree-walking, ALOHA, and slotted ALOHA, permit collision-free communications (see Col. 2, lines 13 - 15).

Regarding claim 11, because Reade teaches that jamming device 30 comprises 10,000 or more RFID chips 32 such that 10,000 or more RFID signals are transmitted simultaneously (see

Sections [0027] and [0030]), jamming device 30's output signals must carry at least one "0" bit in a given position and one "1" bit in the same position.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. US 2004/0100359A1 (Reade et al.).

Reade teaches that jamming device 30 comprises a large number of RFID chips 32, such as 10,000 or greater depending on the type of RFID system (see Sections [0027] and [0030]). Reade also teaches using a combination of RFID chips 32 (see Section [0009]). Though Reade fails to expressly disclose that RFID chips 32 simulate all possible identifiers for a given set of RFID devices, 10,000 RFID chips 32 are more than sufficient to cover all possible identifiers of 1 - 12 bits in length ($2^{12} + 2^{11} + 2^{10} + 2^9 + 2^8 + 2^7 + 2^6 + 2^5 + 2^4 + 2^3 + 2^2 + 2^1 = 8,190$ chips).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Reade's jamming device 30 such that it simulates all possible identifiers for a given set of RFID device to ensure that responses from RFID smart tags 14 are completely unintelligible.

10. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. US 2004/0100359A1 (Reade et al.) as applied to claim 1 above, and further in view of U.S. Patent Application Publication No. US 2004/0160324A1 (Stilp).

Regarding claims 25 and 26, Reade teaches that scanner 16 is overwhelmed when a large number of RFID identifiers are received simultaneously and is unable to read the multiple responses rapidly enough (see Sections [0008] and [0027]). Here it is understood that scanner 16 is overwhelmed when the number of received RFID identifiers exceeds a specified threshold. In addition, Reade teaches that scanner 16 is overwhelmed when invalid identifiers are received

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(see Section [0009]). Though Reade is silent on scanner 16 accessing a database of valid RFID identifiers in order to determine the presence of invalid RFID identifiers, the Examiner takes Official Notice that RFID interrogators comparing received RFID identifiers to those stored in a data are well known. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Reade's scanner 16 because the method of using a database to verify the validity of a received RFID identifiers enables scanner 16 to determine the presence of specific RFID devices, which is necessary for managing and/or tracking inventory, products, assets, etc. Reade, further omits teaching that scanner 16 actually recognizes the presence of jamming device 30 when a number of perceived RFID identifiers exceeds a specific threshold (as required in claim 25) or when invalid RFID identifiers are received (as required in claim 26).

In an analogous art, Stilp teaches an RFID system, as shown in Fig. 1 comprising a plurality of RFID readers 200 (see Section [0100]) and a plurality of RFID transponders 100 (see Section [0106]). Stilp's RFID reader 200 contains algorithms that determine within a reasonable probability that RFID reader 200 is being subjected to jamming (see Section [0145]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Reade's scanner 16 as taught by Stilp because a scanner 16 that can recognize the presence of a jamming device 30 when (1) the number of received RFID identifiers exceeds a specified threshold or when (2) the received RFID identifiers are determined to be invalid by comparing the received identifiers to those of valid identifiers stored in a database enable scanner 16 to generate an alert, thereby allowing store personnel to determine if jamming device 30 is being used appropriately (e.g., to protect a user's privacy) or

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inappropriately and decide upon an appropriate response the jamming (see Stilp, Section [0145]).


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clara Yang whose telephone number is (571) 272-3062. The examiner can normally be reached on 8:30 AM - 7:00 PM, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (571) 272-3068. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CY


BRIAN ZIMMERMAN
PRIMARY EXAMINER